



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

*54*

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/876,227	06/08/2001	Mark Neuschutz	MERCK 2276	6191

23599 7590 12/13/2004

MILLEN, WHITE, ZELANO & BRANIGAN, P.C.  
2200 CLARENDON BLVD.  
SUITE 1400  
ARLINGTON, VA 22201

EXAMINER

PATEL, NIHIR B

ART UNIT	PAPER NUMBER
----------	--------------

3743

DATE MAILED: 12/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/876,227	Applicant(s) NEUSCHUTZ ET AL.	
	Examiner Nihir Patel	Art Unit 3743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 10.05.2004.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-13 and 20 is/are allowed.
- 6) ☒ Claim(s) 14-19 and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

In view of the appeal brief filed on August 18<sup>th</sup>, 2004, PROSECUTION IS HEREBY REOPENED.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 14 is rejected under 35 U.S.C. 102(b) as being anticipated by Laing US Patent No. 3,780,356. Referring to claim 14, Laing discloses a cooling device for semiconductor components that comprises a heat sink 2 (see figure 1) and a heat absorbing component containing phase change material 5 and 6 (see figure 1), wherein heat flows from the heat source to the heat sink and flows from the heat sink to the heat absorbing component when the heat sink temperature exceeds the phase change temperature of the phase change material (see figure 1).

It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

The intended use statements are not given any patentable weight in this instance for example “for absorbing heat from a heat source”.

Referring to claim 15, Laing discloses a cooling device for semiconductor components that comprises a heat sink 2 (see figure 1) and a heat absorbing means containing a phase change

Art Unit: 3743

material 5 and 6 (see figure 1), wherein heat flows from the heat source to the heat sink and from the heat sink means 2 to the heat absorbing means when the heat sink temperature exceeds the phase change temperature of the phase change material (see figure 1).

It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

The intended use statements are not given any patentable weight in this instance for example “for absorbing heat from a heat source”.

Referring to claim 16, Laing discloses a cooling device for semiconductor components that comprises a device for absorbing heat, in contact with a heat generating electric or electronic component, a heat sink 2 and a heat absorbing component containing a phase change material (see figure 1), wherein heat flows from the heat generating electric or electronic component to the heat sink, and from the heat sink to the heat absorbing component when the heat sink temperature exceeds the phase change temperature of the phase change material (see figure 1).

It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

The intended use statements are not given any patentable weight in this instance for example “for absorbing heat”.

Referring to claim 21, Laing discloses an apparatus wherein the heat absorbing component is in direct contact with the electric or electronic component (see figure 1).

Referring to claim 17, Laing's discloses a cooling device for semiconductor components that comprises contacting the electric or electronic component with a heat sink and a heat absorbing component containing a phase change material (see figure 1), wherein heat flows from the heat sink to the heat absorbing component when the heat sink temperature exceeds the phase change temperature of the phase change material (see figure 1).

Referring to claim 18, Laing discloses a heat sink temperature that exceeds the phase change temperature of the phase change material at peak output of the electric or electronic component (see figure 1).

Referring to claim 19, Laing discloses an apparatus wherein the heat from the electric or electronic component flows directly to the heat sink (see figure 1).

***Allowable Subject Matter***

Claims 1 through 13 and 20 are allowed.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Nihir Patel whose telephone number is (571) 272-4803. The examiner can normally be reached on Monday-Friday from 7:30 am to 4:30 pm. If attempts to reach the examiner by telephone are unsuccessful the examiner supervisor Henry Bennett can be reached at (571) 272 4791.

NP  
December 8<sup>th</sup>, 2004

Henry Bennett  
Supervisory Patent Examiner  
Group 3700